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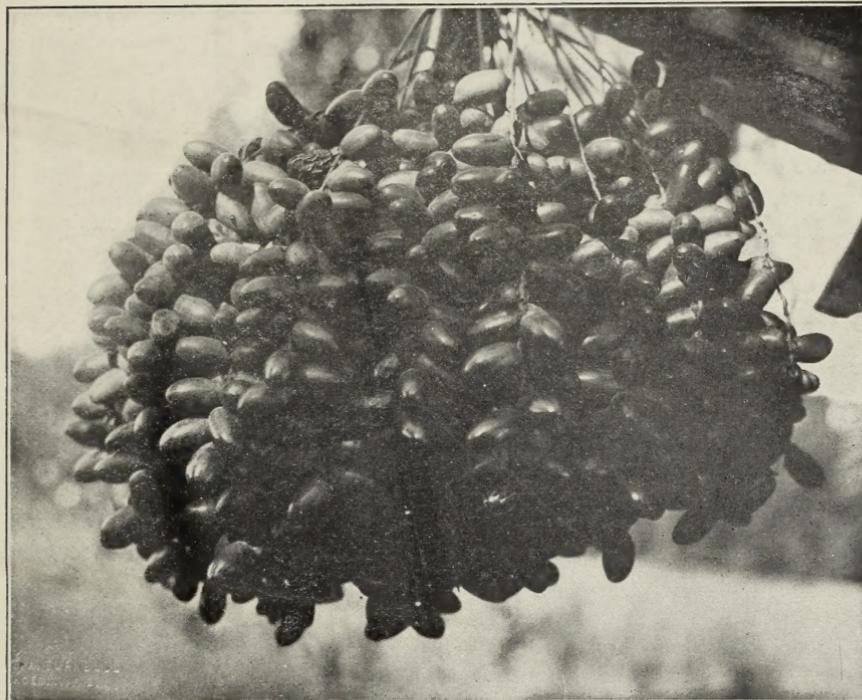
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U.S. DEPARTMENT OF AGRICULTURE  
Washington, D. C.

# DATE GROWING

IN  
CALIFORNIA AND ARIZONA



Grown in Arizona

**D**ATE palms have been fruiting in California and Arizona for a quarter of a century. More than 200 of the world's best varieties have been imported by the U. S. Department of Agriculture and most of them are now fruiting. Several hundred acres have been planted by individuals, of which about 60 acres are already bearing. Every test ends in the same proof: that the industry is one of the best adapted to the Coachella valley, Imperial valley, Colorado river country and some parts of Arizona. In these regions the date thrives as well as in Asia or Africa and is far more profitable.

Given good treatment, the palm commences to bear at an early age in the United States, and should begin to yield returns in the fifth year, increasing for 10 years and continuing for a century or more. From the age of six or seven years, good palms will bear 100 pounds

or more of fruit per tree. It has been conservatively figured that profits from a date plantation of choice imported varieties, given intelligent care, should not fall below \$500 per acre for many years, while those who enter the field at once, when the output is still limited, will have the advantage of fancy prices for the product, yielding a return several times as high as that just mentioned. These figures are based on the sale of fruit alone, not counting the value of offshoots.

### WHERE THE PALM THRIVES

The date palm is adapted, in general, to a sandy loam, but varieties can be secured which will fit almost any soil. Excellent dates are grown in stiff clay or adobe and fairly good results have been had in sand, such as that at the Mecca experiment station, by enriching the soil. Most of the soil in Coachella or Imperial valley will produce good dates, if care is taken to select a variety suited to the location, but the palm naturally will produce results proportionate to the richness of the ground. The West India Gardens will endeavor to select varieties suited to the land of their patrons.

A small amount of alkali is no hindrance to culture, particularly if it is on the surface. The Palm cannot be successfully grown, however, in soil that is heavily impregnated throughout: there must be at least a layer that does not contain more than 1%, in which the roots can spread out. "Black alkali" is more injurious. Good drainage of the soil is necessary. The crop was not injured by a temperature of 17 degrees last winter.

### HOW TO PLANT OFFSHOOTS

Offshoots should be taken from the parent tree when two or three years old, 15 to 45 pounds in weight, and with a few roots. They are planted in nursery rows for the first year, until they are rooted, and should be set to the depth of the greatest diameter of the bulb. It is well to paint the cut ends of leaf stalks, and any cuts or abrasions on the palm, with asphaltum roofing paint, (in order to prevent radiation of moisture,) and to shelter the offshoot with burlap.

May and June are the best months for planting, and the offshoot then requires constant attention—many have been killed at this stage through carelessness and ignorance of the owner, although with intelligent supervision there is no reason for the loss of many plants. The ground must be kept moist during the first summer, but never soggy. Treatment varies according to the heaviness of the soil, but a good system in many localities is to irrigate two days and let the ground slightly dry the third day, repeating this for the first month at least, after which the amount of moisture can be very slowly tapered



Imported offshoot after six years at Indio



Preparing West India Gardens' 1912 shipment of offshoots in Sahara desert

off until in winter once a week may suffice. During the first summer even a short period of drought will kill the delicate roots that are being put out, and leave a dead offshoot.

#### **CULTURE OF THE PALM**

After the offshoots are rooted, they should be transplanted to the open ground, preferably 33 feet apart each way, or 40 to the acre. No manure should be used until they are well established in orchard form: after that the plant may be judiciously fertilized. Irrigation is necessary throughout the year, except when flowers are setting and when the crop is ripening: a water supply of approximately one inch for each acre will be found desirable. The ground should be kept well cultivated.

When the female blossoms in February, it should be pollinated by hand with a sprig of the male blossom: this operation does not require any great skill. The palm then demands no special attention until fall, when the crop ripens from August to October.

#### **HANDLING THE CROP**

Probably all fruit will in the future be ripened artificially, since this process is simple and cheap and greatly increases profits by eliminating loss from fermentation, insects, dust storms, handling, and drying on the tree. The dates are picked when full size but still hard, soaked in water and placed in an incubator or oven with moist heat for about 20 hours, when they come out in perfect condition for sale, every berry intact and not sticky.



The same offshoots in nursery, Coachella Valley, California

Choice dates processed in this manner were quickly sold on the Los Angeles market last fall at \$1 per pound, netting the grower 75 cents. Packed in fancy boxes, this grade of fruit can hardly fall below 40 or 50 cents for many years.

#### **SEEDLING DATES**

Dates do not come true from seed, any more than apples or oranges do. It is as unreasonable to expect to build up a high-grade commercial business on seedling dates as it would be to try it with either of those fruits. Anyone who doubts this should inspect the date oasis of Eastern Spain, where the trees are all seedlings, and the fruit so mixed and heterogeneous that it can not be graded or used for anything but the lowest-priced trade.

Those who plant seedlings must wait three or four years for the first blossoms, when they can eliminate all the males, half of the total planting. In another year or two the females will bear a little fruit, and the worthless ones, which in many cases have been found to comprise three-fourths of the whole, also dug up. The remaining fairly good females, perhaps 20% of the whole number first planted, will be so varied that the grower will be practically unable to handle the high grade package-date trade, even if a few of his seedlings should produce very choice fruit, as may well be the case. Arabs in the great date-growing regions of the world do not dream of planting seedlings for commercial purposes, and far sighted growers with



Imported palm fruiting in California, 1912

capital in the United States, who have investigated the situation, have almost uniformly rejected the idea.

#### **VARIETIES TO PLANT**

In the past, North Africa has furnished most of the offshoots brought to the United States, because it was most easily accessible. The Persian gulf is a greater and more famous date country, and the West India Gardens has sent its special representative to that region to make a thorough study of the industry there, as it has already done in North Africa, and to bring out a large shipment of the choicest varieties. Many of these have been introduced in the past, on an experimental scale, by the Department of Agriculture, and have proved remarkably successful.

The characteristics of a desirable date are: adaptability to local soil and climate, early ripening, good shipping qualities, good flavor, smallness of seed and freedom from fibre, and good keeping qualities. The Persian gulf dates, the most famous in the world, combine these characteristics in a unique way and the West India Gardens will secure such as are thoroughly desirable and obtainable, for their customers. Among them are:

Khalasa of Hasa, most famous date in the world. Grows in a sandy soil. Flesh of exquisite date flavor and consistency of a chocolate caramel.

Mirhage of Mendeli, reported to David Fairchild of U. S. Department of Agriculture as the best date grown on the Tigris river.



Palms imported from Persian Gulf growing at government station, Mecca, California

Fard of Oman, best of imported dates sold on the American market. It has proved even better in the United States than in its own country, partly because it is handled in a better way here.

Maktum of Bagdad, one of the two best in its region, and has proved unusually well adapted to American conditions. Recommended by the government officials as desirable for California and Arizona.

Khadrawi of Basra, a large soft date which has fruited both in California and Arizona and been highly praised. It is well adapted to conditions here.

Kustawi, a Bagdad variety, ranked second to Khadrawi by its success in Arizona.

Halawi of Basra, commonly sold in the United States under the trade name of "Golden Date." As grown in the southwest, it is immeasurably superior to the badly-handled fruit sent here by the Arabs.

Ascherasi of Bagdad, a medium-sized semi-dry date ripening in September, vigorous, hardy and with exceptional shipping and keeping qualities.

Nagal of Maskat, almost unequaled as an early ripener (June in Maskat).

#### **CONDITIONS OF SALE**

The West India Gardens will deliver offshoots from these or similar varieties from the Persian gulf, probably about May 1, 1913, at \$8 apiece, one-half of the purchase price payable in advance with

the order. Buyers can depend on the varieties being the best obtainable, with special reference to the conditions under which they are to be planted in this country, and true to name. Those who plant such offshoots will be able to take 10 or 20 offshoots from their own trees, during the first 15 years of their growth. They can thus extend their own holdings, or sell the offshoots: and if they only brought one-half the present market price, they would still pay the entire upkeep of the plantation, or more.



7 year old Persian Gulf palm at Indio

discovered, there is no drawback to the date industry: it stands out as the most important and profitable that can be undertaken by residents of the regions we have outlined.

The importation which we made from Algeria last spring is admitted to be one of the best ever brought over, and we believe we can get even better varieties this year from the heart of the Arabic world, and bring them through in equally good condition. Date importation is no longer an experiment with us, any more than date growing is an experiment for American ranchers, and we expect this introduction of world-famous varieties, the first to be made on a commercial scale from the Persian gulf, will give the industry as great an impetus as it has ever received.

Since an absolute insecticide for scale has been

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